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Genotoxicity of helicobacter pylori δpai in DNA comet assay

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Abstract

Chronic infection with Helicobacter pylori is a factor inducing development of cancer diseases. The mechanism of its action on the «host» DNA is still not clear. In present study we investigate genotoxical potential of two strains of H. pylori: wild type H. pylori P12 and PAI-deficienl mutant H. pylori δPAI. DNA damage was detected by DNA comet assay in gastric adenocarcinoma (AGS) and epithelial adenocarcinoma (HeLa) cells under neutral conditions using Tail Moment as a quantitative parameter. It was shown, that infection of AGS and HeLa cells with both strains H. pylori at different multiplicity of infection (20-500) for 6 h and infection of AGS for 12 h did not induce DNA damage. Our results revealed a significant dose-dependent increasing of Tail Moment in the AGS cells after infection with mutant H. pylori δPAI for 24 h, while genotoxity of wild type H. pylori P12 under the same conditions was not observed.

Keywords

Carcinogenesis, DNA coiner assay, Genotoxity, Helicobacter pylori